INDEX TO AUTHORS.

A

Aldrich, Martha. See GREENE, ALDRICH, and ROWNTREE, 753

Anderson, R. J. See SHRINER and ANDERSON, 743

Andrew, Robert H. See FENGER, ANDREW, and RALSTON, 187

Andrews, James C. The alkaline decomposition of cystine, 191

B

Balls, A. K., and **Wolff, William A.** The determination of morphine, 379

— and —. The optical activity of pseudomorphine, 403

Barr, David P., Ronzoni, Ethel, and **Glaser, Jerome.** Studies of the inhibitory action of an extract of pancreas upon glycolysis. II. Effect of the inhibitor upon the glycolysis of malignant tumors, 331

—. See RONZONI, GLASER, and BARR, 309

Bazin, Eleanor V. See RABINOWITCH and BAZIN, 723

Beard, Howard H. See RAPPORT and BEARD, 413

Bechdel, S. I., Honeywell, Hannah E., Dutcher, R. Adams, and **Knutsen, M. H.** Synthesis of vitamin B in the rumen of the cow, 231

Bell, Marion. Studies on the composition of human milk, 239

Bills, Charles E., and **Honeywell, Edna M.** Antiricketic substances. VIII. Studies on highly purified ergosterol and its esters, 15

—, —, and **Cox, Warren M., Jr.** Antiricketic substances. IX. Quantitative biophysical studies on the activation of ergosterol, 557

Bischoff, Fritz. Preparation of some substituted guanidines, 345

Blanco, J. G. See RAYMOND and BLANCO, 631

Blankenhorn, M. A. Blood urobilin. The urobilin content of normal human blood. Description of a method, 477

Bloor, W. R. Distribution of unsaturated fatty acids in tissues. III. Vital organs of beef, 443

Brown, J. B. The highly unsaturated fatty acid of liver lipids. The preparation of arachidonic acid, 455

C

Cave, H. W. See TITUS, CAVE, and HUGHES, 565

Chanutin, Alfred, and **Silvette, Herbert.** The influence of fasting and creatine feeding upon the creatine content of the tissues and blood of the white rat, 589

XUM

Cox, Gerald J. See EAGLES and COX, 249
Cox, Warren M., Jr. See BILLS, HONEYWELL, and COX, 557

D

Deuel, Harry J., Jr. See NORD and DEUEL, 115
Du Bois, Eugene F. See MCCLELLAN, SPENCER, FALK, and DU BOIS, 639
Dutcher, R. Adams. See BECHDEL, HONEYWELL, DUTCHER, and KNUTSEN, 231

E

Eagles, Blythe Alfred, and **Cox, Gerald J.** The availability of ergothioneine in supplementing rations deficient in histidine, 249
— and **Vars, Harry M.** The physiology of ergothioneine, 615
Evenden, James. See NORD and DEUEL, 115
Everett, Mark R., and **Sheppard, Fay.** Total sugar of blood and urine. II. The hydrolyzable sugar of blood, 255

F

Falk, Emil A. See MCCLELLAN, SPENCER, FALK, and DU BOIS, 639
Fenger, Frederic, Andrew, Robert H., and **Ralston, A. Wheeler.** On the isoelectric precipitation of pepsin. II, 187
Friedenson, Myer, Rosenbaum, M. K., Thalheimer, E. J., and **Peters, John P.** Cutaneous and venous blood sugar curves. I. In normal individuals after insulin and in liver disease, 269

G

Glaser, Jerome. See BARR, RONZONI, and GLASER, 331
—. See RONZONI, GLASER, and BARR, 309
Greene, Carl H., Aldrich, Martha, and **Rowntree, Leonard G.** Studies in the metabolism of the bile. III. The enterohepatic circulation of the bile acids, 753
Greenwald, Isidor. The chemistry of Jaffe's reaction for creatinine. V. The isolation of the red compound, 103
Groth, A. H. See SMITH, Groth, and WHIPPLE, 659
Guerrant, N. B., and **Salmon, W. D.** Some factors affecting the adsorption of quinine, oxalate, and glucose by fullers' earth and norit, 67
—. See SALMON, GUERRANT, and HAYS, 91

H

Hanke, Milton T., and **Koessler, Karl K.** The effect of scurvy-producing diets and tyramine on the blood of guinea pigs, 499
Hauge, Sigfred M., and **Trost, John F.** An inheritance study of the distribution of vitamin A in maize, 107
Hays, I. M. See SALMON, GUERRANT, and HAYS, 91
Heinbecker, Peter. Studies on the metabolism of Eskimos, 461
Herr, Elizabeth F. See WRIGHT, HERR, and PAUL, 571

Honeywell, Edna M. See Bills and Honeywell, 15
—. See Bills, Honeywell, and Cox, 557
Honeywell, Hannah E. See Bechdel, Honeywell, Dutcher, and Knutsen, 231
Howard, C. H. See Russell, Massengale, and Howard, 155
Hughes, J. S. See Titus, Cave, and Hughes, 565

J

Jackson, Richard W., Sommer, Beatrice E., and **Rose, William C.** Experiments on the nutritive properties of gelatin, 167
Johnson, Clarence A. See Rising and Johnson, 709
Jones, D. Breese. See Nelson and Jones, 215

K

Kahn, Bernard S., and **Leiboff, S. L.** Colorimetric determination of inorganic sulfate in small amounts of urine, 623
Keil, H. L. See Titus, Cave, and Hughes, 565
Kendall, Edward C., and **Simonsen, D. G.** Seasonal variations in the iodine and thyroxine content of the thyroid gland, 357
Kenyon, Marjorie B. See Lightbody and Kenyon, 149
King, Earl J. The estimation of silica in tissues, 25
Knutsen, M. H. See Bechdel, Honeywell, Dutcher, and Knutsen, 231
Ko, Luther. See Shriner and Ko, 1
Koessler, Karl K. See Hanke and Koessler, 499
Kramer, Hildegarde V. See Somogyi and Kramer, 733

L

Leiboff, S. L. A colorimetric method for the determination of lipoidal phosphorus in blood, 211
—. See Kahn and Leiboff, 623
Levene, P. A., and **Raymond, Albert L.** Hexosediphosphate, 633
— and **Taylor, F. A.** On cerebronic acid. VI, 227
—. See Taylor and Levene, 609
Lightbody, Howard D., and **Kenyon, Marjorie B.** Feeding experiments with a diet low in tyrosine, 149

M

Marcus, Joseph Keats. A new process for the separation of the vitamin fraction from cod liver oil, 9
Massengale, O. N. See Russell, Massengale, and Howard, 155
McClellan, Walter S., Spencer, Henry J., Falk, Emil A., and **Du Bois, Eugene F.** Clinical calorimetry. XLIII. A comparison of the thresholds of ketosis in diabetes, epilepsy, and obesity, 639
— and **Toscani, Vincent.** Clinical calorimetry. XLIV. Changes in the rate of excretion of acetone bodies during the twenty-four hours, 653

N

Navez, Albert E., and **Rubenstein, B. B.** Starch hydrolysis as affected by polarized light, 503

Nelson, E. M., and **Jones, D. Breese.** Observations bearing on the determination of vitamin A, 215

Nelson, J. M., and **Papadakis, Philippos.** Inactivation of invertase and raffinase by heat, 163

Nord, Folke, and **Deuel, Harry J., Jr.** Animal calorimetry. XXXVII. The specific dynamic action of glycine given orally and intravenously to normal and to adrenalectomized dogs, 115

O

Oser, Bernard L. The intestinal pH in experimental rickets, 487

P

Papadakis, Philippos. See Nelson and Papadakis, 163

Paul, John R. See Wright, Herr, and Paul, 571

Peters, John P. See Friedenson, Rosenbaum, Thalheimer, and Peters, 269

Q

Quick, Armand J. Quantitative studies of β-oxidation. II. The metabolism of phenylvaleric acid, phenyl-α,β-pentenic acid, phenyl-β,γ-pentenic acid, mandelic acid, phenyl-β-hydroxypropionic acid, and acetophenone in dogs, 515

Quick, Armand J. Quantitative studies of β-oxidation. IV. The metabolism of conjugated glycuronic acids, 535

—. See Sweet and Quick, 527

R

Rabinowitch, I. M., and **Bazin, Eleanor V.** Blood sugar and respiratory metabolism time curves of normal individuals, following simultaneously administered glucose and insulin, 723

Ragins, Ida Kraus. The further application of the vanillin-hydrochloric acid reaction in the determination of tryptophane in proteins, 543

—. The rate with which tryptophane is liberated from proteins by enzymes, 551

Ralston, A. Wheeler. See Fenger, Andrew, and Ralston, 187

Rapport, David, and **Beard, Howard H.** The effects of protein split-products upon metabolism. III. Further investigation of the fractionated protein hydrolysates and amino acids, and their relation to the specific dynamic action of the proteins, 413

Rawles, B. W., Jr. See Chanutin and Silvette, 589

Raymond, Albert L., and **Blanco, J. G.** Blood sugar determination and separation of sugars with live yeast. A correction, 631

—. See Levene and Raymond, 633

Rising, Mary M., and **Johnson, Clarence A.** The biuret reaction. I. The biuret reaction of acid imides of the barbituric acid type, 709

Ronzoni, Ethel, Glaser, Jerome, and **Barr, David P.** Studies of the inhibitory action of an extract of pancreas upon glycolysis. I. Effect of pancreatic inhibitor on the glycolysis of muscle tissue and muscle extract, 309

—. See BARR, RONZONI, and GLASER, 331

Rose, William C. See JACKSON, SOMMER, and ROSE, 167

Rosenbaum, M. K. See FRIEDENSON, ROSENBAUM, THALHEIMER, and PETERS, 269

Rowntree, Leonard G. See GREENE, ALDRICH, and ROWNTREE, 753

Rubenstein, B. B. See NAVEZ and RUBENSTEIN, 503

Russell, Walter C., Massengale, O. N., and **Howard, C. H.** The duration of the effect of ultra-violet radiation on chickens, 155

S

Salmon, W. D., Guerrant, N. B., and **Hays, I. M.** The effect of hydrogen ion concentration upon adsorption of the active factors of vitamin B complex by fullers' earth, 91

—. See GUERRANT and SALMON, 67

Sheppard, Fay. See EVERETT and SHEPPARD, 255

Shope, Richard E. Cholesterol esterase in animal tissues, 127

Shope, Richard E. Differences in serum and plasma content of cholesterol ester, 125

—. The effect of age on the total and combined cholesterol of the blood serum, 141

—. The hypercholesterolemia of fasting as influenced by the separate administration of fats, carbohydrates, and proteins, 133

Shriner, R. L., and **Anderson, R. J.** A contribution to the chemistry of grape pigments. V. The anthocyans in Ives grapes, 743

— and **Ko, Luther.** Some derivatives of cholesterol, 1

Silvette, Herbert. See CHANUTIN and SILVETTE, 589

Simonsen, D. G. See KENDALL and SIMONSEN, 357

Smith, H. P., Groth, A. H., and **Whipple, G. H.** Bile salt metabolism. I. Control diets, methods, and fasting output, 659

— and **Whipple, G. H.** Bile salt metabolism. II. Influence of meat and meat extractives, liver and kidney, egg yolk and yeast in the diet, 671

—. See WHIPPLE and SMITH, 685, 697

Soderstrom, G. F. See MCCLELLAN, SPENCER, FALK, and DUBOIS, 639

Sommer, Beatrice E. See JACKSON, SOMMER, and ROSE, 167

Somogyi, Michael, and **Kramer, Hildegarde V.** The nature of blood sugar, 733

Spencer, Henry J. See McClellan, Spencer, Falk, and Du Bois, 639
Steenbock, H. See Waddell and Steenbock, 431
Stuart, E. H. See Sure, 289, 297
Sure, Barnett. Dietary requirements for fertility and lactation. XIX. Does copper supplement vitamin B for lactation? 289
—. XX. A differentiation of the vitamin B complex in rice polishings as evidenced in studies of lactation, 297
Sweet, J. E., and Quick, Armand J. Quantitative studies of β-oxidation. III. The fate of phenylbutyric acid in depancreatized dogs, 527

T

Taylor, F. A., and Levene, P. A. Oxidation of lignoceric acid, 609
—. See Levene and Taylor, 227
Thalheimer, E. J. See Friedenson, Rosenbaum, Thalheimer, and Peters, 269
Titus, R. W., Cave, H. W., and Hughes, J. S. The manganese-copper-iron complex as a factor in hemoglobin building, 565
Toscani, Vincent. See McClellan, Spencer, Falk, and Du Bois, 639
—. See McClellan and Toscani, 653
Trost, John F. See Hauge and Trost, 107

V

Van Donk, Evelyn. See Waddell and Steenbock, 431
Vars, Harry M. See Eagles and Vars, 615

W

Waddell, J., and Steenbock, H. The destruction of vitamin E in a ration composed of natural and varied foodstuffs, 431
Walker, Dorothy J. See Sure, 289, 297
Watkins, O. Lactose metabolism in women, 33
Whipple, G. H., and Smith, H. P. Bile salt metabolism. III. Tryptophane, tyrosine, and related substances as influencing bile salt output, 685
— and —. IV. How much bile salt circulates in the body? 697
—. See Smith, Groth, and Whipple, 659
—. See Smith and Whipple, 671
Wolff, William A. See Balls and Wolff, 379, 403
Wright, Sydney L., Jr., Herr, Elizabeth F., and Paul, John R. The relationship of lactic acid to the optical activity of normal and diabetic blood before and after glycolysis, 571

INDEX TO SUBJECTS.

A

Acetone bodies:
Excretion rate changes during twenty-four hours (McClellan and Toscani) 653

Acetophenone:
Metabolism in dogs (Quick) 515

Acid (s):
Bile. *See* Bile acid.
Fatty. *See* Fatty acid.

Acid imide:
Barbituric acid type, biuret reaction (Rising and Johnson) 709

Adrenalectomy:
Glycine, specific dynamic action of (Nord and Deuel) 115

Adsorption:
Fullers' earth, glucose (Guerrant and Salmon) 67
— —, hydrogen ion concentration effect, active factors of vitamin B (Salmon, Guerrant, and Hays) 91
— —, oxalate (Guerrant and Salmon) 67
— —, quinine (Guerrant and Salmon) 67
Glucose, by fullers' earth and norit (Guerrant and Salmon) 67
Norit, glucose (Guerrant and Salmon) 67

Adsorption—*continued:*
Norit, oxalate (Guerrant and Salmon) 67
—, quinine (Guerrant and Salmon) 67
Oxalate, by fullers' earth and norit (Guerrant and Salmon) 67
Quinine, by fullers' earth and norit (Guerrant and Salmon) 67
Vitamin B complex, active factors, by fullers' earth, hydrogen ion concentration effect (Salmon, Guerrant, and Hays) 91

Amino acid(s):
Specific dynamic action relation to protein (Rapport and Beard) 413

Anthocyan:
Grape, Ives (Shriner and Anderson) 743

Arachidonic acid:
Preparation (Brown) 455

B

Barbituric acid:
Acid imides, biuret reaction, type of (Rising and Johnson) 709

Beef:
Fatty acids, unsaturated, vital organs (Bloor) 443

Beef—*continued:*
Vital organs, unsaturated fatty acids (BLOOR) 443
Bile:
Metabolism. III (GREENE, ALDRICH, and ROWNTREE) 753
Bile acid (s):
Enterohepatic circulation (GREENE, ALDRICH, and ROWNTREE) 753
Bile salt:
Amount circulating in body (WHIPPLE and SMITH) 697
Metabolism. I (SMITH, GROTH, and WHIPPLE) 659
—. II (SMITH and WHIPPLE) 671
—. III (WHIPPLE and SMITH) 685
—. IV (WHIPPLE and SMITH) 697
Output, egg yolk, influence (SMITH and WHIPPLE) 671
—, fasting (SMITH, GROTH, and WHIPPLE) 659
—, kidney feeding influence (SMITH and WHIPPLE) 671
—, liver feeding influence (SMITH and WHIPPLE) 671
—, meat extractives influence (SMITH and WHIPPLE) 671
—, — influence (SMITH and WHIPPLE) 671
—, tryptophane influence (WHIPPLE and SMITH) 685
—, tyrosine influence (WHIPPLE and SMITH) 685
Bile salt—*continued:*
Output, yeast, influence (SMITH and WHIPPLE) 671
Biuret reaction:
I (RISING and JOHNSON) 709
Acid imides, barbituric acid type (RISING and JOHNSON) 709
Blood:
Creatine content, fasting and creatine feeding influence (CHANUTIN and SILVETTE) 589
Optical activity, glycolysis (before and after), lactic acid relationship (WRIGHT, HERR, and PAUL) 571
— —, lactic acid relationship before and after glycolysis (WRIGHT, HERR, and PAUL) 571
Phosphorus, lipoid, colorimetric determination (LEIBOFF) 211
Scurvy-producing diets effect (HANKE and KOESSLER) 499
Sugar curves, cutaneous and venous. I (FRIEDENSON, ROSENBAUM, THALHEIMER, and PETERS) 269
— —, — — venous, after insulin in normal individuals (FRIEDENSON, ROSENBAUM, THALHEIMER, and PETERS) 269
— —, — — venous, in liver disease (FRIEDENSON, ROSENBAUM, THALHEIMER, and PETERS) 269

Blood—*continued:*
Sugar curves, glucose and insulin effect, normal individuals (RABINOWITCH and BAZIN) 723
— —, insulin and glucose effect, normal individuals (RABINOWITCH and BAZIN) 723
— —, venous and cutaneous. I (FRIEDENSON, ROSENBAUM, THALHEIMER, and PETERS) 269
—, determination (RAYMOND and BLANCO) 631
—, hydrolyzable (EVERETT and SHEPPARD) 255
—, nature (SOMOGYI and KRAMER) 733
—, total. II (EVERETT and SHEPPARD) 255
Tyramine administration effect (HANKE and KOESSLER) 499
Urobilin content, human (BLANKENHORN) 477
— determination (BLANKENHORN) 477
Blood plasma:
Cholesterol ester content, differences in serum and (SHOPE) 125
Blood serum:
Cholesterol ester content, differences in plasma and (SHOPE) 125
—, total and combined, age effect on (SHOPE) 141

C

Calorimetry:
Animal. XXXVII (NORD and DEUEL) 115
Calorimetry—*continued:*
Clinical. XLIII (McCLELLAN, SPENCER, FALK, and DU BOIS) 639
—. XLIV (McCLELLAN and TOSCANI) 653
Carbohydrate:
Hypercholesterolemia of fasting, administration effect (SHOPE) 133
Cerebronic acid:
VI (LEVENE and TAYLOR) 227
Cholesterol:
Blood serum, total and combined, age effect on (SHOPE) 141
Derivatives (SHRINER and KO) 1
Ester, blood plasma and serum content, differences in (SHOPE) 125
—, — serum and plasma content, differences in (SHOPE) 125
Esterase, animal tissues (SHOPE) 127
Cod liver oil:
Vitamin fraction, separation (MARCUS) 9
Colorimetric method:
Phosphorus, lipoid, blood determination (LEIBOFF) 211
Sulfate, inorganic, urine (KAHN and LEIBOFF) 623
Copper:
Hemoglobin building, -manganese-iron complex, factor (TITUS, CAVE, and HUGHES) 565
Vitamin B supplement, for lactation (SURE) 289

Creatine:
Blood content, fasting and creatine feeding influence (CHANUTIN and SILVETTE) 589
Feeding, fasting and, creatine content of tissues and blood influenced by (CHANUTIN and SILVETTE) 589
Tissue content, fasting and creatine feeding influence (CHANUTIN and SILVETTE) 589
Creatinine:
Jaffe's reaction, chemistry. V (GREENWALD) 103
Red compound, isolation (GREENWALD) 103
Cystine:
Alkaline decomposition (ANDREWS) 191

D

Diabetes:
Ketosis threshold (MCCLELLAN, SPENCER, FALK, and DU BOIS) 639
Diet:
Bile salt metabolism (SMITH, GROTH, and WHIPPLE) 659
Ergothioneine supplement in histidine-deficient (EAGLES and COX) 249
Fertility requirements. XIX (SURE) 289
— —. XX (SURE) 297
Histidine-deficient, ergothioneine as supplement (EAGLES and COX) 249
Diet—*continued:*
Lactation requirements. XIX (SURE) 289
— —. XX (SURE) 297
Scurvy-producing, blood, effect (HANKE and KOESSLER) 499
Tyrosine-low, effect (LIGHTBODY and KENYON) 149
Vitamin E destruction in (WADDELL and STEENBOCK) 431

E

Egg:
Yolk, bile salt output, influence (SMITH and WHIPPLE) 671
Enzyme(s):
Esterase, cholesterol, animal tissues (SHOPE) 127
Tryptophane liberation from proteins by (RAGINS) 551
Epilepsy:
Ketosis threshold (MCCLELLAN, SPENCER, FALK, and DU BOIS) 639
Ergosterol:
(BILLS and HONEYWELL) 15
Activation, quantitative biophysical studies (BILLS, HONEYWELL, and COX) 557
Esters (BILLS and HONEYWELL) 15
Ergothioneine:
(EAGLES and VARS) 615
Histidine-deficient diet, supplement (EAGLES and COX) 249

Eskimo:
Metabolism (HEINBECKER) 461

Esterase:
Cholesterol, animal tissue (SHOPE) 127

Excretion:
Acetone bodies, rate changes during twenty-four hours (MCCLELLAN and TOSCANI) 653

Extract:
Muscle, glycolysis, pancreatic inhibitor effect (RONZONI, GLASER, and BARR) 309
Pancreas, glycolysis, inhibitory action on. I (RONZONI, GLASER, and BARR) 309
—, —, — — on. II (BARR, RONZONI, and GLASER) 331

F

Fasting:
Bile salt output (SMITH, GROTH, and WHIPPLE) 659
Creatine content, blood, influence of creatine feeding and (CHANUTIN and SILVETTE) 589
— —, tissues, influence of creatine feeding and (CHANUTIN and SILVETTE) 589
Hypercholesterolemia, carbohydrate administration effect (SHOPE) 133
—, fat administration effect (SHOPE) 133
—, protein administration effect (SHOPE) 133

Fat:
Hypercholesterolemia of fasting, administration effect (SHOPE) 133

Fatty acid(s):
Unsaturated, beef vital organs (BLOOR) 443
—, liver lipids (BROWN) 455
—, tissue distribution. III (BLOOR) 443

Fertility:
Dietary requirements. XIX (SURE) 289
— —. XX (SURE) 297

Fullers' earth:
Glucose, adsorption by (GUERRANT and SALMON) 67
Hydrogen ion concentration, effect on adsorption of active factors of vitamin B by (SALMON, GUERRANT, and HAYS) 91
Oxalate, adsorption by (GUERRANT and SALMON) 67
Quinine, adsorption by (GUERRANT and SALMON) 67

G

Gelatin:
Nutritive properties (JACKSON, SOMMER, and ROSE) 167

Glucose:
Adsorption by fullers' earth and norit (GUERRANT and SALMON) 67

Glucose—*continued:*
Blood sugar curves, insulin and, normal individuals (RABINOWITCH and BAZIN) 723
Respiratory metabolism curves, insulin and, normal individuals (RABINOWITCH and BAZIN) 723
Glycine:
Specific dynamic action, adrenalectomized dogs (NORD and DEUEL) 115
— — —, normal dogs (NORD and DEUEL) 115
Glycolysis:
Blood, lactic acid and optical activity relationship in, before and after (WRIGHT, HERR, and PAUL) 571
—, optical activity and lactic acid relationship in, before and after (WRIGHT, HERR, and PAUL) 571
Muscle extract, pancreatic inhibitor effect (RONZONI, GLASER, and BARR) 309
— tissue, pancreatic inhibitor effect (RONZONI, GLASER, and BARR) 309
Pancreas extract, inhibitory action. I (RONZONI, GLASER, and BARR) 309
— —, — —. II (BARR, RONZONI, and GLASER) 331
Tumors, malignant, pancreas inhibitor effect on (BARR, RONZONI, and GLASER) 331
Glycuronic acid:
Conjugated, metabolism (QUICK) 535
Metabolism, conjugated (QUICK) 535
Grape:
Anthocyans, Ives (SHRINER and ANDERSON) 743
Pigments, chemistry. V. (SHRINER and ANDERSON) 743
Guanidine(s):
Substituted, preparation (BISCHOFF) 345

H

Hemoglobin:
Building, copper factor (TITUS, CAVE, and HUGHES) 565
—, copper-iron-manganese complex, factor (TITUS, CAVE, and HUGHES) 565
—, iron-copper-manganese complex, factor (TITUS, CAVE, and HUGHES) 565
—, iron factor (TITUS, CAVE, and HUGHES) 565
—, manganese-copper-iron complex, factor (TITUS, CAVE, and HUGHES) 565
—, manganese factor (TITUS, CAVE, and HUGHES) 565
Hexosediphosphate:
(LEVENE and RAYMOND) 633
Histidine:
-deficient diet, ergothioneine as supplement (EAGLES and COX) 249

Hydrogen ion:
Concentration, adsorption effect by fullers' earth of active factors of vitamin B (SALMON, GUERRANT, and HAYS) 91
—, intestinal contents, rickets (OSER) 487
Hypercholesterolemia:
Carbohydrate administration, influence in fasting (SHOPE) 133
Fasting, carbohydrate administration, influence (SHOPE) 133
—, fat administration, influence (SHOPE) 133
—, protein administration, influence (SHOPE) 133
Fat administration, influence in fasting (SHOPE) 133
Protein administration, influence in fasting(SHOPE) 133

I

Imide:
Acid, biuret reaction, barbituric acid type (RISING and JOHNSON) 709
Insulin:
Blood (cutaneous and venous) sugar curves, after (FRIEDENSON, ROSENBAUM, THALHEIMER, and PETERS) 269
— sugar curves, glucose and, normal individuals (RABINOWITCH and BAZIN) 723
Insulin—*continued:*
Respiratory metabolism curves glucose and, normal individuals (RABINOWITCH and 'BAZIN) 723
Intestine:
Hydrogen ion concentration, rickets (OSER) 487
Rickets, hydrogen ion concentration (OSER) 487
Invertase:
Inactivation by heat (NELSON and PAPADAKIS) 163
Iodine:
Thyroid gland, seasonal variations in content (KENDALL and SIMONSEN) 357
Iron:
Hemoglobin building, -copper-manganese complex, factor (TITUS, CAVE, and HUGHES) 565

J

Jaffe reaction:
Creatinine, chemistry. V (GREENWALD) 103

K

Ketosis:
Diabetes, threshold (McCLELLAN, SPENCER, FALK, and DU BOIS) 639
Epilepsy, threshold (McCLELLAN, SPENCER, FALK, and DU BOIS) 639

Ketosis—*continued:*
Obesity, threshold (McCLELLAN, SPENCER, FALK, and DU BOIS) 639
Threshold, diabetes (McCLELLAN, SPENCER, FALK, and DU BOIS) 639
—, —, epilepsy, and obesity, comparison (McCLELLAN, SPENCER, FALK, and DU BOIS) 639
—, epilepsy (McCLELLAN, SPENCER, FALK, and DU BOIS) 639
—, obesity (McCLELLAN, SPENCER, FALK, and DU BOIS) 639
Kidney:
Bile salt output, influence (SMITH and WHIPPLE) 671

L

Lactation:
Dietary requirements. XIX (SURE) 289
— —. XX (SURE) 297
Vitamin B complex, differentiation, in rice polishings (SURE) 297
— —, copper supplement for (SURE) 289
Lactic acid:
Blood, optical activity relationship in, before and after glycolysis (WRIGHT, HERR, and PAUL) 571
Lactose:
Metabolism, women (WATKINS) 33
Light:
Polarized, starch hydrolysis, effect of (NAVEZ and RUBENSTEIN) 503
Lignoceric acid:
Oxidation (TAYLOR and LEVENE) 609
Lipid:
Fatty acid, unsaturated, liver (BROWN) 455
Liver, fatty acid, unsaturated (BROWN) 455
Lipoid:
Phosphorus, blood, colorimetric determination (LEIBOFF) 211
Liver:
Bile salt output, influence (SMITH and WHIPPLE) 671
Disease, blood (cutaneous and venous) sugar curves (FRIEDENSON, ROSENBAUM, THALHEIMER, and PETERS) 269
Lipids, unsaturated fatty acid (BROWN) 455

M

Maize:
Vitamin A distribution, inheritance (HAUGE and TROST) 107
Mandelic acid:
Metabolism in dogs (QUICK) 515
Manganese:
Hemoglobin building, -copper-iron complex, factor (TITUS, CAVE, and HUGHES) 565
Meat:
Bile salt output, influence (SMITH and WHIPPLE) 671

Meat—*continued:*
Extractives, bile salt output, influence (SMITH and WHIPPLE) 671
Metabolism:
Acetophenone, in dogs (QUICK) 515
Bile. III (GREENE, ALDRICH, and ROWNTREE) 753
— salt. I (SMITH, GROTH, and WHIPPLE) 659
— —. II (SMITH and WHIPPLE) 671
— —. III (WHIPPLE and SMITH) 685
— —. IV (WHIPPLE and SMITH) 697
Eskimo (HEINBECKER) 461
Glycuronic acids, conjugated (QUICK) 535
Lactose, women (WATKINS) 33
Mandelic acid, in do (QUICK) 5gs
Phenyl-β-hydroxypropionic acid, in dogs (QUICK) 515
Phenyl-α, β-pentenic acid, in dogs (QUICK) 515
Phenyl-β, γ-pentenic acid, in dogs (QUICK) 515
Phenylvaleric acid, in dogs (QUICK) 515
Protein split-products, effects on. III (RAPPORT and BEARD) 413
Respiratory, curves, glucose and insulin effect, normal individuals (RABINOWITCH and BAZIN) 723
Metabolism—*continued:*
Respiratory, curves, insulin and glucose effect, normal individuals (RABINOWITCH and BAZIN) 723
Milk:
Composition, human (BELL) 239
Human, composition (BELL) 239
Morphine:
Determination (BALLS and WOLFF) 379
Pseudo-, optical activity (BALLS and WOLFF) 403
Muscle:
Extract, glycolysis, pancreatic inhibitor (RONZONI, GLASER, and BARR) 309
Tissue, glycolysis, pancreatic inhibitor (RONZONI, GLASER, and BARR) 309

N

Norit:
Glucose, adsorption by (GUERRANT and SALMON) 67
Oxalate, adsorption by (GUERRANT and SALMON) 67
Quinine, adsorption by (GUERRANT and SALMON) 67

O

Obesity:
Ketosis threshold (McCLELLAN, SPENCER, FALK, and DU BOIS) 639
Oil:
Cod liver. *See* Cod liver oil.

Optical activity:
Blood, glycolysis (before and after), lactic acid relationship (WRIGHT, HERR, and PAUL) 571
—, lactic acid relationship to glycolysis (before and after) (WRIGHT, HERR, and PAUL) 571
Pseudomorphine (BALLS and WOLFF) 403
Oxalate:
Adsorption by fullers' earth and norit (GUERRANT and SALMON) 67
β-Oxidation:
Quantitative studies. II (QUICK) 515
— —. III (SWEET and QUICK) 527
— —. IV (QUICK) 535

P

Pancreas:
Extract, glycolysis, inhibitory action. I (RONZONI, GLASER, and BARR) 309
—, —, — —. II (BARR, RONZONI, and GLASER) 331
—, glycolytic inhibition of malignant tumors (BARR, RONZONI, and GLASER) 331
—, — — of muscle tissue and muscle extract (RONZONI, GLASER, and BARR) 309
Pancreatectomy:
Phenylbutyric acid, fate in depancreatized dogs (SWEET and QUICK) 527
Pepsin:
Isoelectric precipitation. II (FENGER, ANDREW, and RALSTON) 187
Phenylbutyric acid:
Depancreatized dogs, fate (SWEET and QUICK) 527
Phenyl-β-hydroxypropionic acid:
Metabolism in dogs (QUICK) 515
Phenyl-α, β-pentenic acid:
Metabolism in dogs (QUICK) 515
Phenyl-β, γ-pentenic acid:
Metabolism in dogs (QUICK) 515
Phenylvaleric acid:
Metabolism in dogs (QUICK) 515
Phosphorus:
Lipoid, colorimetric determination, blood (LEIBOFF) 211
Pigment:
Grape, chemistry. V (SHRINER and ANDERSON) 743
Polarized light:
Starch hydrolysis, effect of (NAVEZ and RUBENSTEIN) 503
Protein(s):
Hydrolysates, fractionated, specific dynamic action relation (RAPPORT and BEARD) 413
Hypercholesterolemia of fasting, administration effect (SHOPE) 133
Specific dynamic action, relation of fractionated protein hydrolysates and amino acids (RAPPORT and BEARD) 413

Protein(s)—*continued:*
Split-products, effects on metabolism. III (RAPPORT and BEARD) 413
Tryptophane determination, vanillin-hydrochloric acid reaction (RAGINS) 543
— rate of liberation by enzymes (RAGINS) 551
Pseudomorphine:
Optical activity (BALLS and WOLFF) 403

Q

Quinine:
Adsorption by fullers' earth and norit (GUERRANT and SALMON) 67

R

Radiation:
Ultra-violet, duration effect on chickens (RUSSELL, MASSENGALE, and HOWARD) 155
Raffinase:
Inactivation by heat (NELSON and PAPADAKIS) 163
Respiratory metabolism:
Curves, glucose and insulin effect, normal individuals (RABINOWITCH and BAZIN) 723
—, insulin and glucose effect, normal individuals (RABINOWITCH and BAZIN) 723
Rice:
Polishings, vitamin B complex, differentiation, evidenced in lactation studies (SURE) 297
Rickets:
Antirachitic substances. VIII (BILLS and HONEYWELL) 15
— —. IX (BILLS, HONEYWELL, and COX) 557
Hydrogen ion concentration, intestinal (OSER) 487

S

Scurvy:
Blood, effect (HANKE and KOESSLER) 499
Silica:
Determination, tissues (KING) 25
Tissues, determination (KING) 25
Specific dynamic action:
Amino acids, proteins, relation (RAPPORT and BEARD) 413
Glycine, adrenalectomized dogs (NORD and DEUEL) 115
—, normal dogs (NORD and DEUEL) 115
Protein (RAPPORT and BEARD) 413
— hydrolysates, fractionated (RAPPORT and BEARD) 413
Starch:
Hydrolysis, polarized light effect (NAVEZ and RUBENSTEIN) 503
Sugar(s):
Blood, curves, cutaneous and venous. I (FRIEDENSON, ROSENBAUM, THALHEIMER, and PETERS) 269

Sugar(s)—*continued:*
Blood, curves, glucose and insulin effect, normal individuals (RABINOWITCH and BAZIN) 723
—, —, insulin and glucose effect, normal individuals (RABINOWITCH and BAZIN) 723
—, —, venous and cutaneous. I (FRIEDENSON, ROSENBAUM, THALHEIMER, and PETERS) 269
— (cutaneous and venous), curves, in liver disease (FRIEDENSON, ROSENBAUM, THALHEIMER, and PETERS) 269
— — —, curves, insulin effect in normal individuals (FRIEDENSON, ROSENBAUM, THALHEIMER, and PETERS) 269
—, determination (RAYMOND and BLANCO) 631
—, hydrolyzable (EVERETT and SHEPPARD) 255
—, nature (SOMOGYI and KRAMER) 733
—, total. II (EVERETT and SHEPPARD) 255
Determination, blood (RAYMOND and BLANCO) 631
Separation, live yeast (RAYMOND and BLANCO) 631
Urine, total. II (EVERETT and SHEPPARD) 255

Sulfate:
Inorganic, colorimetric determination, urine (KAHN and LEIBOFF) 623

T

Thyroid:
Iodine content, seasonal variations (KENDALL and SIMONSEN) 357
Thyroxine content, seasonal variations (KENDALL and SIMONSEN) 357

Thyroxine:
Thyroid gland, seasonal variations in content (KENDALL and SIMONSEN) 357

Tissue(s):
Cholesterol esterase, animal (SHOPE) 127
Creatine content, fasting and creatine feeding influence (CHANUTIN and SILVETTE) 589
Fatty acids, unsaturated, distribution. III (BLOOR) 443
Muscle, glycolysis, pancreatic inhibitor effect (RONZONI, GLASER, and BARR) 309
Silica determination (KING) 25

Tryptophane:
Bile salt output, influence (WHIPPLE and SMITH) 685
Determination, proteins, vanillin-hydrochloric acid reaction (RAGINS) 543
Proteins, rate of liberation by enzymes (RAGINS) 551

Tumor:
Malignant, glycolysis, pancreatic inhibitor effect (BARR, RONZONI, and GLASER) 331
Tyramine:
Blood effect of administration (HANKE and KOESSLER) 499
Tyrosine:
Bile salt output, influence (WHIPPLE and SMITH) 685
Diet, low, effect (LIGHTBODY and KENYON) 149

U

Ultra-violet:
Radiation, duration effect on chickens (RUSSELL, MASSENGALE, and HOWARD) 155
Urine:
Sugar, total. II (EVERETT and SHEPPARD) 255
Sulfate, inorganic, colorimetric determination (KAHN and LEIBOFF) 623
Urobilin:
Blood, content, human (BLANKENHORN) 477
—, determination (BLANKENHORN) 477

V

Vanillin-hydrochloric acid reaction:
Tryptophane determination, proteins (RAGINS) 543
Vitamin(s):
A, determination (NELSON and JONES) 215
Vitamin(s)—*continued:*
A, distribution in maize, inheritance (HAUGE and TROST) 107
B complex, active factors, adsorption by fullers' earth, hydrogen ion concentration effect (SALMON, GUERRANT, and HAYS) 91
— —, — —, hydrogen ion concentration effect on adsorption by fullers' earth (SALMON, GUERRANT, and HAYS) 91
— — —, rice polishings, differentiation, evidenced in lactation studies (SURE) 297
—, copper supplement, for lactation (SURE) 289
—, lactation, copper supplement (SURE) 289
—, synthesis in cow rumen (BECHDEL, HONEYWELL, DUTCHER, and KNUTSEN) 231
Cod liver oil, fraction, separation (MARCUS) 9
E, destruction (WADDELL and STEENBOCK) 431

Y

Yeast:
Bile salt output influence (SMITH and WHIPPLE) 671
Sugar separation (RAYMOND and BLANCO) 631

ST. LOUIS MED. 1929